EASTERN ARCTIC STUDY
CASE STUDY SERIES:
THE DEVELOPMENT OF THE
POLARIS MINE

by

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EASTERN ARCTIC STUDY
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FOREWORD

The Eastern Arctic Study is a joint project of the Institute of Local Government and the Centre for Resource Studies, both at Queen's University in Kingston. Funding for the study has been provided by the Donner Canadian Foundation.

This paper is one of a series of case studies that has been prepared as background material for the Eastern Arctic Study, and which will be used to develop scenarios for possible future developments in constitutional change, land claims settlements, local government, and the regulation of mineral development within the claim area of the Inuit Tapirisat of Canada. The opinions expressed are those of the author, and do not necessarily represent the views of the Donner Foundation, or of the Institute of Local Government or the Centre for Resource Studies or their sponsors.

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SUMMARY

This case reviews the history of the Polaris mine, from the initial discovery of lead/zinc deposits on Little Cornwallis Island in 1960 to the conclusion of the development agreement between the Government of Canada and Cominco Ltd. in 1980. The length of time required to secure necessary government approvals for development, and to undertake other consultations, is remarkable. In part, this reflects the variety of interests, structures, and environmental and socio-economic impact studies involved in mounting the Polaris development. The significant length of time involved also reflects the fluidity of the regulatory regime for northern resource developments.

Community councils in northern communities affected by the development have served as a focal point for consultation by Cominco, and, to a lesser extent, by the federal and territorial governments. Although all parties consulted with communities, there was no legal basis or requirement for delegating any actual decision-making power concerning Polaris to community councils.

There are several issues that emerge from the development of the Polaris mine. These may be broadly categorized as follows:

i environmental issues;
ii issues related to employment and training for northerners;
iii issues concerning the nature of the workplace;
iv issues related to the process for consultation and approval of the Polaris mine and for monitoring its operation and impact;
v issues concerning the impact of the mine on northern communities;
vi issues concerning the economic spinoffs from the mine in northern and southern Canada;
vii the issue of the Polaris mine as part of the accumulated development of Canada's north.

Although all of the issues listed above are extremely important in the context of northern development, the last four are particularly germane to the Eastern Arctic Study. With regard to the process for consultation and approval of the mine, the major question which seems to emerge is how to establish a development approval process which provides for the timely consideration of socio-economic incentive for industrial concerns to pursue development. (As far as consideration of these issues for Polaris is concerned, no one, neither proponent nor opponent, seems to be particularly satisfied with the process.)

A variety of interests have come forward in the process of approval of the Polaris mine. The most prominent were Cominco Ltd., as the proponent; the federal government and its various agencies; the Government of the Northwest Territories; individual communities; Inuit Tapirisat of Canada (ITC); the Inuit Development Corporation (IDC); and the environmental interest group, Canadian Arctic Resources Committee (CARC). Each of these interests has taken a particular approach to the consultation and approval process and to the development itself. Cominco, ITC, the regional Inuit associations and CARC eventually became involved in an adversarial situation, as various public statements were made in the course of regulatory hearings and in press conferences, concerning the extent and nature of public information about the project and the timing and form of the approval process. The federal government, both in Ottawa and in Yellowknife, appears to have been concerned largely with regulation of the project and with its national industrial benefits. The GNWT was involved primarily in discussions about employment and training for northerners and in negotiation of the socio-economic agreement.

Specific communities deemed by Cominco to be affected by the mine or to be potential sources of employees were consulted from 1973 onward. The focal point for company-community discussions has consistently been the community council, and these discussions seem to have become increasingly employment-oriented. However, communities have also been concerned about such matters as: the timing of approval of the mine in relation to land claims discussions; effects on the environment; the need for ongoing and more formal company-community consultation, perhaps using a company-community committee; and the question of how to involve other organizations, such as the regional Inuit Associations and regional councils, in discussions about the mine. In general, Cominco is given good marks by communities for the approach it has taken in community consultation.

The Inuit Tapirisat of Canada has publicly expressed concern about the environmental and planning implications of Polaris. ITC is also concerned about what it considers the prejudicial impact of Polaris on land claims negotiations and on any settlement provisions. These concerns and others have been expressed through ITC representatives at community meeetings, briefs presented at public hearings and through the media. CARC has indicated environmental concerns similar to those of ITC and has also made submissions at public hearings.

The Inuit Development Corporation has pursued somehwat different interests related to the Polaris development. It has engaged in discussions with Cominco and federal and GNWT officials to determine the potential for economic spin-offs from the development and for opportunities for IDC participation. It became involved in recruitment of personnel for the construction phase, and continues

to provide recruitment services under contract to Cominco now that the mine is in operation.

There is confusion as to where communities and other interests fit into the approval process. For example, although communities must be consulted about the issuing of land use permits and water licences for mineral exploration and development activities, communities in the central Arctic tend to feel ill-informed about applications and powerless to effect changes. Moreover, the federal presence does not appear to be strong in central Arctic communities which are asked to comment on applications. New government/community discussions about the nature of the current approval process and the prospects for change might be in order. In any event, the rules of the game for community participation in development decisions should be clarified. Most important is the need to distinguish decision-making from advisory functions.

The impact of Polaris on northern communities, particularly those in the central and eastern Arctic, is important. It would appear that local governments in a number of affected communities have a limited capacity to deal with the impacts of a development like Polaris because of the limited number of people available to fill leadership positions in the community.

Consideration of developments like Polaris by local officials must sometimes be sacrificed to the necessity of dealing with other immediate issues related to the very survival of the community. Beyond the general impact of development on communities that supply employees, the potential effect of Polaris on the infrastructure of Resolute, which is a staging community, has been recognized as considerable.

The purchase of goods and services for construction and operation of the mine creates secondary employment in different parts of the country, as does the spending power of mine employees. This question of economic spinoffs has been of interest to a number of parties including the federal government, the GNWT, ITC, IDC and northern communities.

Cominco, as the proponent of the mine, has also been interested in northern economic spinoffs and the question of how to balance northern preference with economic efficiency considerations. Cominco is committed to a northern preference policy for purchasing through its socio-economic agreement with the GNWT, and has instituted a northern employment program, 'Operation Katak'.

The major questions which remain concern how northerners will participate in future resource developments, and what will be the involvement of individual

community entrepreneurs, community development corporations which might emerge, and organizations like IDC and co-ops.

The final issue emerging from the Polaris case which is of relevance to the Eastern Arctic Study concerns the relationship of the Polaris development to other resource development initiatives occurring in the north today, or anticipated in the near future. For example, a socio-economic study commissioned by Cominco pointed to the dangers of uncoordinated competition among major projects for northern employees. A potential scramble for the available northern labour force would be disruptive to community life and unprofitable for the various projects in the long run. The challenge of coping with multiple resource developments of a major nature is one which must be faced by communities in the central and eastern Arctic, as well as by other levels of government. A useful approach to coordinating the various levels of government and proponents of development, while at the same time dealing with the effects of development pressures on communities, must be developed.

A central question which emerged from the Polaris case study concerns the extent to which individual communities are prepared to deal with resource development in the North. This question of preparedness seems to break down into three components.

i the extent of interest which individual communities show in resource development matters and in pursuing resource development;
ii the extent to which communities understand the development process, the wage economy, and southern business and public administration practices;
iii the extent to which individual communities have the capacity to deal with resource development issues.

There seems to be a spectrum of interest among central Arctic communities in resource development in general and the Polaris mine in particular. It remains an open question as to how companies and governments should deal with the various communities and their degree of interest, when pursuing resource development proposals.

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1. INTRODUCTION

The overall objective of the Eastern Arctic Study is to examine the implications of constitutional development and of native land claims for local government and for industrial development in one particular land claim area, that of the Inuit Tapirisat of Canda (ITC). An integral part of Eastern Arctic Study research is the undertaking of a series of case studies. The basic purpose of these is to examine specific instances of past industry/community/and other government interaction concerning industrial development.

Three types of case studies have been prepared. The first type, and likely the most important for the purposes of the Eastern Arctic Study, are studies of specific examples of interaction occurring within ITC's claim area. The second deals with interaction between companies, communities and other levels of government within the Northwest Territories but outside the ITC claim area. For example, the existence and potential importance of the COPE claim as a determinant of interaction between industry, local governments, and other levels of government is recognized as being in a separate category, although COPE is also formally a constituent part of ITC. The final group of case studies concerns the industrial development regime established in jurisdictions which have already settled native land claims. By studying existing claim settlements, even in different political jurisdictions, it may be possible to identify the strengths and weaknesses of particular approaches to industry/community/government interaction. Accordingly, the James Bay settlement in Quebec (both the Inuit and Cree settlements) and the settlement between the native peoples of Alaska and the United States and Alaskan State governments are examined. These two cases are being treated as supplementary ones, designed to provide an overview of the particular claims settlement involved and the apparent strengths and weaknesses of the industrial development process emanating from each.

Four possibilities were considered when selecting cases for study within the ITC claim area and elsewhere within the Northwest Territories. These were:

1. cases involving communities with a long history of industrial development activity;
2. cases involving communities with a recent (i.e. only one major involvement) history of industrial activity;
3. cases involving communities with a long history of industrial development but which have also experienced a pull-out by industry; and
4. cases involving communities where industrial development activity is anticipated in the near future.

Other factors entered into the selection process. For example, it was thought to be worthwhile to investigate any differences between the interaction of oil and/or gas companies with northern communities and other governments as compared with those firms involved in hard rock mineral exploration or development. Furthermore, differences in company/community/government interaction related to exploration as opposed to development activities were also thought to be worth considering.

After consultation with the Eastern Arctic Study Advisory Committee, it was decided not to pursue case studies involving communities where significant industrial development activity might be anticipated in the near future. Such research might be extremely disruptive to the sometimes fragile relationships between communities, industrial development concerns and government. In addition, the possibility that such research might, in itself, create anxiety in communites under pressure for development also militated against selection of cases of this type.

It was also determined that thorough, systematic research of communities with a long history of industrial development, but which have experienced a pull-out of industry, would be difficult to accomplish. The main example of such a community in the ITC claim area is Rankin Inlet. However, the mine in Rankin closed in the early 1960s and the community and its population have changed significantly since that time. This would make it difficult to obtain comprehensive information related to the development, operation, and eventual closing down of the Rankin Mine.

The above considerations prompted the decision to concentrate on cases within the ITC claim area and elsewhere within the NWT which involve communities with a long history of industrial development activity or those with a recent history of such activity. In addition, the variables of industrial development involving oil and/or gas companies as compared to hard rock mineral companies and exploration as opposed to development were taken into account in selecting specific cases.

Case studies selected within the ITC claim area and elsewhere within the Northwest Territories are as follows:

TABLE 1
EASTERN ARCTIC STUDY MAJOR CASE STUDIES

Case	NWT/ITC	Long/Recent Community Involvement	Oil,Gas/ Hard Rock Mineral	Exploration Development
Nanisivik Mine	ITC	Recent	Hard Mineral	Development
Polaris Mine	ITC	Recent & Long	Hard Mineral	Development
Baker Lake	ITC	Recent	Hard Mineral	Exploration
Beaufort Sea	NWT	Recent & Long	Oil & Gas	Exploration

This case study deals with the development of the Polaris mine on Little Cornwallis Island. The Polaris mine is the development of a hard rock mineral (lead/zinc) deposit within the ITC claim area. Although Polaris has only recently gone into production, it has had identifiable impacts on a number of northern communities. Those involved have had varying degrees of previous involvement and interest in pursuing a wage economy. The communities which have been identified as being most affected by the Polaris development are: Holman Island, Coppermine, Cambridge Bay, Spence Bay, Pelly Bay, Gjoa Haven, Resolute, and possibly some communities in the North Baffin.

Research concerning the Polaris development included the review of relevant documentation and personal interviews. Documentation concerning government approval of the Polaris Mine and its actual development was received from Cominco Ltd., the developer, the federal government, the government of the Northwest Territories, ITC, and the Canadian Arctic Resources Committee (CARC).

The communities of Holman Island, Coppermine, Cambridge Bay, Spence Bay, Pelly Bay, Gjoa Haven, Arctic Bay, and Pond Inlet were visited for approximately three days each. These visits had three main objectives. The first was to inform the council and other interested members of the local community about the Eastern Arctic Study in general and about the case studies in particular. In a number of communities, formal presentations were made to council concerning the Eastern Arctic Study, and question and answer sessions followed. Second, interviews were held with members of the local council, local government staff, and other interested parties in each community. Finally, in each community, council minutes and other documentation were reviewed to determine the context and nature of communications between the community, companies like Cominco, and other levels of government concerning industrial development. In addition to the interviews in communities, other interviews concerning the Polaris case stu-

dy were conducted in Ottawa, Yellowknife, Toronto and in the regional offices of the Government of the Northwest Territories in Cambridge Bay and Frobisher Bay. A list of relevant interviews is appended to this paper.

It would have been impossible to amass the material contained in this working paper and its appendices without the assistance and goodwill of people in northern communities, the government of the Northwest Territories, the Government of Canada, Cominco Ltd., the Inuit Tapirisat of Canada, and others.

In addition, a draft of this working paper was presented to all members of the Eastern Arctic Study Advisory Committee, for comment and correction. Copies of the draft were also sent to other interested individuals, communities, and organizations. The comments received were of considerable assistance.

This research effort has been directed toward preparation of a chronology of the Polaris Mine development and identification of specific issues which have emerged concerning that development. Another objective has been to trace the interaction among the various interested parties as they have dealt with the proposal to develop the Polaris Mine and its preparation for production.

In presenting the results of this work, an effort has been made to present the variety of perspectives concerning the Polaris development in as neutral a manner as possible. Nevertheless, the Eastern Arctic Study requires some interpretive commentary about the nature of the process for approval of the Polaris mine and the involvement of local communities. The author and the Eastern Arctic Study assume responsibility for these interpretive comments as well as for any factual errors made in this paper.

2. OVERVIEW OF THE CASE

The Polaris Mine and Its Development

The Polaris mine, owned and operated by Cominco Ltd., began mining and concentrating lead/zinc ore in the last quarter of 1981.[1]

The mine is located in the high Arctic on Little Cornwallis Island, 60 miles northwest of Resolute Bay and 90 miles southeast of the Magnetic North Pole. Polaris is Canada's northern-most mine. The mine will be the eleventh largest lead/zinc producer in the world, with ore reserves estimated at 23,000,000 tonnes and an initial production capacity of 2,050 tonnes per day. It will produce 170,000 tonnes of zinc concentrate annually and 38,000 tonnes of lead concentrate. With its current ore reserves, the mine has an estimated lifespan of at least twenty years.

Certain construction features of the Polaris mine have been the subject of widespread interest. The mine's concentrating plant was constructed on a barge in Trois Rivières, Québec. Seven stories high and longer than a football field, the concentrator was towed approximately 4800 kilometres to the mine site in the summer of 1981. The terrain on Little Corwallis Island can be described as barren and rugged. The living quarters which have been erected on the site for mine personnel are in some contrast, containing private or double rooms plus recreational facilities which include a swimming pool.

Upon commencing production, the Polaris mine will provide employment for upward of 200 people. Employees, both male and female, northern and southern, will be housed in the company-run living quarters at the mine site. Northern employees will have a work rotation schedule of six weeks on-site and four weeks off and southern employees will have a rotation of ten weeks and two weeks.

On 4 February 1980, the Government of Canada, as represented by the Minister of Indian Affairs and Northern Development, and Cominco Ltd. signed a Letter of Understanding which outlines, in general terms, the basis upon which the project has been approved. When the 1980 Letter of Understanding was signed, certain specific negotiations concerning the mine's operation were still underway. How-

1. Until 1979, the Polaris mine development was known as the Arvik mine development. In 1979, Arvik became Polaris. For the purpose of this working paper, the development will be consistently referred to as the Polaris mine.

ever, it was understood that the Polaris mine would comply with existing regulatory requirements such as The Northern Inland Waters Act, The Territorial Lands Act, The Arctic Waters Pollution Prevention Act, The Ocean Dumping Control Act, The Fisheries Act, and others.[2] It was also understood that socio-economic considerations would be dealt with in pending discussions between Cominco and the Government of the Northwest Territories.

The recent conclusion of the development agreement between the Government of Canada and Cominco Ltd. perhaps belies the complex history of the Polaris development. The following summary of key dates and issues in the history of the development of the mine before 1981 provides some indication of what occurred. For more detailed information concerning events, participants, and the structures established to deal with the proposed mine, refer to the detailed chronology of the Polaris mine development contained in appendix I.

In 1960, lead/zinc deposits were discovered on Little Corwallis Island by geologists working for J.C. Sproule and Associates Ltd. who were retained by Bankeno Mines Limited in their exploration for oil and gas. Bankeno conducted further prospecting on Little Cornwallis from 1961-64. In 1964, Cominco obtained a 75-percent interest in all Bankeno's Arctic mineral properties. From 1964 to 1970, Cominco was involved in exploration of the area in which the Polaris mine is now located and of the rest of Little Cornwallis Island. A new joint venture company, Arvik Mines Ltd., was formed to develop the Little Cornwallis properties in 1971. At this point, attention became focused increasingly on the Polaris orebody, which began to be delineated through diamond drilling that same year.

The period from 1972 to 1975 was one in which some indication of the complex issues surrounding the Polaris development began to emerge. As indicated above, technical work was undertaken both on the surface and underground to define the orebody in more detail. Also, a mine construction feasibility study was undertaken. In addition, in 1973 discussions began between Cominco and the Northwest Territories Water Board concerning water licensing requirements, and between Cominco and the Department of Indian Affairs and Northern Development (DIAND) and the Department of the Environment (DOE) concerning the environmental impact

2. Cominco Ltd., Employment of the Inuit at Polaris, Little Cornwallis Island. A Feasibility Study Requested by Arvik Mines Ltd., 1973. Study done by J.E. Barrett, Personnel Development Services;
Cominco Ltd., Polaris Mine Project;
Northern Miner, November 8, 1979, p. 1, 11; January 17, 1980, p. B2; February 28, 1980, p. 15; april 24, 1980, p. 10; May 1, 1980, p. 14; January 31, 1981, p. 8; and Western Miner, May 1980, p. 62; June 1980, p. 53-54.

of the proposed development. These latter discussions concerned the possibility that the Polaris development would be subject to review under the Environmental Assessment Review Process. Parallel to these discussions, a variety of environmental studies was undertaken, particularly concerning water use and tailings disposal by the mine. Company-government discussions were also occasioned by the need for Cominco to obtain an export license to ship concentrate from the mine outside the country in order to find markets. Finally, in 1973 Cominco also began its formal process of community consultation concerning the proposed mine development. In that year, J.E. Barrett undertook a series of community visits for Cominco to those central Arctic communites identified by the company as being influenced by the development and as being potential sources of northern employees.

Company-government and company-community interaction intensified during 1976. In that year, DIAND officials requested an Environmental Assessment Review Process (EARP) review of the Polaris project. However the Federal Environmental Assessment Review Office (FEARO) decided that the existing review mechanisms were adequate for the Polaris development. More environmental studies were undertaken.

That same year, discussions concerning the socio-economic impact of the mine began in earnest between Cominco, the government of the Northwest Territories and the federal government. In addition, Cominco initiated an intensive series of community visits which also involved officials from DIAND and the GNWT. Included in the community consultation program undertaken that year was a familiarization visit to the Polaris minesite and to the Nanisivik mine for representatives of affected central Arctic communities. Major observations emerging from this series of community consultations were that communities in the central Arctic exhibited a wide range of variations in their familiarity with the wage economy and the activity of mining. There was also some variation in the receptivity of individual communities to the idea of mine development before land claims were settled. Over the period during which the community visits occurred, there emerged a general interest in the possible employment opportunities offered by the mine. For the purpose of the Eastern Arctic Study, it is significant that Cominco focused its attention on community councils rather than other local organizations or individuals, as the main source of contact and consultation.

Despite this varied and intensive activity, Cominco announced in 1976 that it would halt mine development activities until difficulties in negotiations concerning the export permit and concentrate shipping restrictions were ironed out with the federal government.

Further environmental studies and discussions between Cominco and the federal and territorial governments occurred between 1977 and 1979, and in November 1979 Cominco announced that the Polaris development would proceed. This announcement aroused the concern of certain interested groups, and later in November the Inuit Tapirisat of Canada and the Canadian Arctic Resources Committee held a joint press conference concerning the Polaris development and related environmental and land claims issues. This and other activities prompted further ITC/federal government and ITC/Cominco discussions concerning the development.

In 1980, the Letter of Agreement was signed by the federal government and Cominco concerning the terms and conditions of the Polaris development. In the agreement, the Government of the Northwest Territories was assigned major responsibility for socio-economic matters. This prompted further discussions between the GNWT and Cominco concerning northern employment and other socio-economic issues. One basis for discussion concerning socio-economic matters was a consultant's report on the anticipated socio-economic impact of Polaris, which was undertaken for Cominco and completed during 1980.[3] A coordinating committee of government and company personnel was established to avoid bottlenecks and other difficulties in implementation of the development.

Formal announcement of the development prompted discussions between Cominco and the Inuit Development Corporation (IDC) concerning possible business opportunities emerging from development of the mine. IDC is the organization established by the Inuit Tapirisat of Canada to invest and manage funds received as a result of any land claims agreement. It has its own board of directors, president and staff. During 1980, IDC became involved in supplying construction labour on the Polaris site.

In May 1980, at the time when construction of the mine was about to begin, the Northwest Territories Water board held a hearing in Resolute Bay regarding the application by Cominco Ltd. for a water use license for use of water and for waste disposal associated with mining and milling at the Polaris mine. A subsequent public meeting was held in Resolute Bay to deal with issues not related directly to water use. The Water Board hearing elicited submissions from ITC and CARC as part of the continued representations by both organizations to the government of the Northwest Territories and the federal government. ITC and CARC submissions questioned the environmental impact of the mine development itself, the development approval process, and the involvement of northern residents in that process.

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3. Outcrop Ltd. and DPA Consulting Ltd., Potential Socio-Economic Impacts of the Polaris Mine Project, June 1980

Construction of the Polaris mine continued during 1981. With the approaching completion of construction, recruitment of personnel to operate the mine was stepped up. Matters related to employment were included in a Memorandum of Understanding between the Government of the Northwest Territories and Cominco concerning the socio-economic action plan for the Polaris mine. This Memorandum of Understanding was concluded on 12 August 1981. It does not provide for a formal northern employment quota at Polaris, perhaps because of the difficulties experienced in meeting such quotas for the Nanisivik mine. However, it notes that Operation Katak, a northern employment program established by Cominco for Polaris, provides the potential for seventy-two positions for Inuit employees once the mine begins operation.[4] The document also specifies differing rotation schemes for northern and southern employees (ten weeks and two weeks for southern employees and six weeks and four weeks for northern employees);[5] provision for a Polaris monitoring body to consist of GNWT and Cominco officials;[6] and ongoing community visitation and consultation with other interested parties such as ITC, regional Inuit associations, IDC, and Regional Councils such as the Baffin Regional Council and the Central Arctic regional council.[7]

Preliminary Observations

This summary of the development of the Polaris Mine leaves some general impressions. First, despite the relatively recent construction of the mine, the development potential of the project has been known for a considerable number of years. The length of time required to secure necessary government approvals for development and to undertake other consultations (albeit not to the satisfaction of all parties) is remarkable. The 20-year period between the discovery of the deposit and announcement of the Letter of Understanding between Cominco and the federal government saw, among other things, the establishment of the Government of the Northwest Territories as it is known today, early pipeline proposals in the Northwest Territories and the Berger Commission in the west, the establishment of ITC and its regional organizations, the establishment of the Inuit Development Corporation, and the emergence of a variety of regulatory regimes from both the federal and territorial governments.

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4. Memorandum of Understanding dated the 12th day of August, 1981, between Cominco Limited and the Government of the Northwest Territories respecting the socio-economic action plan for the Polaris Mine, Little Cornwallis Island, NWT, schedule 1.
5. Ibid., schedule 2.
6. Ibid., schedule 7.
7. Ibid., schedule 6.

Perhaps as a consequence of the length of time involved, the second impression emerging from this summary is of the variety of interests, structures, and studies involved in mounting the Polaris development. Even without a formal environmental assessment review, the Polaris development has been the subject of numerous environmental and socio-economic impact studies.

A final general observation is that northern communities affected by the development (more specifically, their community councils) have served as a focal point for consultation by the company and, to a lesser extent, by other levels of government. Although all parties consulted with communities, there was no legal basis or requirement for delegating any actual decision-making power concerning Polaris to community councils. This is consistent with existing legislative provisions and regulations concerning northern industrial development.

These general observations and more specific ones which emerge from a review of the chronology and other documentation lead to more precise definitions of issues concerning the Polaris development. These issues may be categorized and identified with varying degrees of specificity. Some, although important, do not relate to the specific interests of the Eastern Arctic Study; others are very germane. All are identified here in summary form. Those relevant to the Eastern Arctic Study are explored further in chapter 3.

The issues emerging from the development of the Polaris mine may be broadly categorized as follows:

i environmental issues;
ii issues related to employment and training for northerners;
iii issues concerning the nature of the workplace;
iv issues related to the process for consultation and approval of the Polaris mine and for monitoring its operation and impact;
v issues concerning the impact of the mine on northern communities;
vi issues concerning the economic spinoffs from the mine in northern and southern Canada;
vii the issue of the Polaris mine as part of the accumulated development of Canada's north.

The first three items in this list are extremely important in the context of northern development. Environmental concerns, for example, are the raison d'être of of a number of government departments and agencies as well as environmental interest groups. However, these three issues are not of primary interest to the Eastern Arctic Study. Accordingly, each will be discussed briefly here while the remaining four issues are dealt with more extensively in chapter 3.

As indicated in the summary of the Polaris development presented earlier and the chronology appended, a considerable amount of discussion has occurred about the environmental impact of the Polaris mine. The specific points discussed by Cominco and government representatives, as well as by environmental interest groups, ITC, and citizens of northern communities, cover a wide range of environmental topics. Much attention has been paid by the federal departments of Environment and Fisheries and Oceans, the Northwest Territories Water Board, and the Canadian Arctic Resources Committee to the impact of disposing mine tailings into Garrow Lake on Little Cornwallis Island. Other concerns are related to the influence of the mine on marine life through the impact of shipping traffic to and from the mine site, the impact of bilgewater discharge, and the possibility of oilspills resulting from the use of the concentrator barge as an oil storage vessel. These questions have all been raised by government agencies, including the federal departments of Environment and Fisheries and Oceans as well as the National Museum of Natural Sciences.

An additional water-related issue raised by CARC at Northwest Territories Water Board hearings and in other fora is whether or not the water supply and sewage disposal systems at Polaris are adequate for the potential expansion of mining and processing activities and for the possible establishment of a permanent community on the site. The Inuit Tapirisat of Canada has questioned whether or not the environmental impact of Polaris on wildlife has been adequately assessed. In addition, a group of staff from the National Museum of Natural Sciences pointed out the possible need for special protection measures in the Polar Bear Pass area which is located on an island adjacent to Little Cornwallis. The litany of environmental concerns is rounded out by the anticipated need for protective measures to prevent looting of archeological sites on Little Cornwallis Island. The Archeological Survey of Canada has recommended these measures because of the increased human presence on the island caused by the Polaris mine.[8]

On a more general level, the environmental debate surrounding the Polaris development has concerned the process for approval of the mine. For example, CARC and ITC have advocated that the project be subjected to scrutiny by an EARP panel. ITC has criticized the approval of this particular project before the

8. No attempt has been made to identify the specific occasion(s) at which each of these concerns was raised. Some of this information is found in the chronology appended. Many of these issues were raised at the Northwest Territories Water Board Hearing on the subject of the Application for a Water Use License by Cominco Ltd., Polaris Mine Project, May 22, 1980, in Resolute Bay and in a public meeting the following day to discuss matters not related to water use.

Lancaster Sound Task Force completes its work on a planning regime for the surrounding area. The approval process for Polaris is of immediate concern to the Eastern Arctic Study and will be dealt with in chapter 3.

A second major issue surrounding the Polaris development, but again one which is peripheral to the Eastern Arctic Study, is the employment and training of northerners. Questions about the availability of jobs at the mine are most prominent in the records of public meetings held between Cominco officials and communities, and between GNWT officials, communities and Cominco.

In spite of some reservations about the distance of the mine from home and about the nature of the workplace, there appears to be genuine interest in mine employment by inhabitants of many of the central Arctic communities visited by Cominco and GNWT officials. Concern about the basic qualifications and training of northern residents for mine employment has prompted development of Operation Katak, which involves use of the GNWT basic training system and on-the-job training to equip Inuit for mine employment. This program involves Cominco officials plus the recruitment and training specialists of Canada Employment and the GNWT Department of Economic Development and Tourism. The Inuit Development Corporation (IDC) will also be involved in providing recruitment and community counselling services in the seven northern communities singled out for special emphasis, and in other parts of the north.[9]

The ultimate success of Operation Katak and other on-going northern employment initiatives at Polaris can only be judged after an appropriate period of operation. In contrast to the Nanisivik mine, Polaris has no specific northern employment quotas; however, both Cominco and the Government of the Northwest Territories have indicated a commitment to northern employment objectives.[10] As stated previously, the GNWT is the government with major responsibility for socio-economic aspects of the mine development. Two considerations which may influence the success of these efforts will be the willingness of Inuit from the central Arctic and Baffin to undertake the basic academic upgrading, which some will require before skill training. Also of concern is the general approach which Inuit will take to working at the mine. It is an open question whether Inuit will regard employment at Polaris as a long-term proposition with the prospect of advancement being seen as advantageous, or merely as a short-term means to acquiring the income necessary to pursue other activities.

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9. For more details see Operation Katak, Cominco Ltd., May, 1980.
10. See, for example, Memorandum of Understanding dated the 12th day of August, 1981, between Cominco Ltd. and the Government of the Northwest Territories Respecting the Socio-economic Action Plan for the Polaris Mine, Little Cornwallis Island, NWT.

One set of factors which may influence the success of the Polaris northern employment program relates to the nature of the workplace. Studies conducted for Cominco have raised the question of whether or not a townsite might provide a more stable workforce than the present bunkhouse accommodation.[11] Individual communities and other organizations such as CARC have also raised the issue. Opinion on this issue in communities has varied. The decision for the present is to test the ability of bunkhouse accommodation to maintain a stable workforce.

Of equal concern to communities has been the question of shift rotations and travel arrangement to and from the mine. Cominco has established a different shift rotation for northern and southern employees. Initially, northern employees will work for 6 weeks and have 4 weeks off. Southerners (and northern employees who wish to do so) will work 10 weeks and have 2 weeks off. There is some concern in northern communities that a 6-week absence is too long. This is reflected in the requirement that Cominco examine a 4-and-4 northern rotation schedule.[12]

Cominco has designated ten hiring centres for Polaris, primarily in the central Arctic and Baffin. All employee travel costs to and from these centres will be covered by the company. Northern employees from other communities will be reimbursed by an amount equal to the cost of transporting southern employees to and from Montreal.[13] Employees are allowed two full days of travel time, one day for each way, for each leave. As with the rotation schedule, the influence of these arrangments on the ability of Cominco to hire and retain northern employees has been a matter for discussion and will be tested in practice.

Although the substance of the three issues described so far is not particularly central to the Eastern Arctic Study, the approaches taken to discussing and resolving them are. The nature of the consultation and approval process for the Polaris mine and of the provisions established to date for monitoring its operations represents the first of the major issues considered in the next chapter.

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11. J.E. Barrett, Employment of the Inuit at Polaris, Little Cornwallis Island; and Barrett, J.E. and Associates, The Polaris Project and the Inuit. An assignment concerned with involving the Inuit in the Polaris Mine Development. Requested by Arvik Mines Ltd., 1976
12. Memorandum of Understanding, 12 August 1981, schedule 2, p. 9.
13. Ibid., schedule 1, p. 7-8.

3. MAJOR ISSUES RELEVANT TO THE EASTERN ARCTIC STUDY

As indicated in chapter 2, there are four issues concerning the development of the Polaris mine which are particularly germane to the Eastern Arctic Study. They are:

i issues related to the process for consultation and approval of the Polaris mine and for monitoring its operation and impact;
ii issues concerning the impact of the mine on northern communities;
iii issues concerning the economic spinoffs from the mine in northern and southern Canada;
iv the issue of the Polaris mine as part of the accumulated development of Canada's north.

Each of these can be considered as a catchall for a number of specific concerns emanating from Cominco, the territorial and federal governments, ITC, special interest groups such as CARC, and from northern communities. The particulars of each issue will be discussed, and an attempt will be made to identify the different points of view which have emerged from the various interested parties. Some preliminary observations may also emerge as each issue is explored. Readers are advised, however, that the major task of assessing lessons from past experience represents a subsequent phase of the Eastern Arctic Study.

The Process for Consultation and Approval of the Polaris Mine and for Monitoring Its Operation and Impact

The basic issue which emerges from the Polaris case is related to the substance and method of company and government interaction with affected communities and other interested parties. The question of substance or the content of issues discussed will be dealt with first, since it relates in part to some of the issues discussed in chapter 2.

In the course of public hearings and press conferences, ITC and CARC have expressed the opinion that the Polaris project has been negotiated privately between Cominco and the federal government and, more recently, the GNWT. This might be construed as a general criticism of the development approval process in addition to the specific case of Polaris. ITC and CARC have been particularly critical of what they regard as lack of involvement of Inuit communities and other organizations in discussions concerning the environmental, employment,

economic, and other impacts of the development. The federal government and Cominco have taken the view that such criticisms are not warranted, citing community meetings which occurred and the publication of environmental and other studies prepared on behalf of Cominco. However, the criticisms suggest that the basic question behind this Polaris debate is whether or not every northern mineral development should be subjected to comprehensive review.

The federal government considered whether or not Polaris should be examined through the Environmental Assessment Review Process. The Minister of the Environment concluded that such a review was not required. In the view of his officials, sufficient provision existed for appropriate environmental studies without a formal EARP hearing. For its part, Cominco undertook numerous environmental and other studies, both on its own initiative and at the request of various government agencies. Between 1973 and May 1980, the company held 35 community meetings to explain the project. In addition, the company had to meet numerous regulatory requirements associated with mineral administration in the NWT in the pre-construction phase. Finally, the formal NWT Water Board hearing held in Resolute Bay and the subsequent hearing on matters other than water use provided a forum for the expression of public and government opinion prior to granting the mine's water license.

Without dwelling on the specifics of the environmental and other concerns raised by the various interested parties, the major question which seems to emerge is how to establish a development approval process which provides for the timely consideration of socio-economic and environmental issues by all interested parties while preserving sufficient incentive for industrial concerns to pursue development. As far as consideration of these issues for Polaris is concerned, no one, neither proponent or opponent, seems to be particularly satisfied with the process.[14] On the other hand, our research for other Eastern Arctic Study cases has indicated that the EARP process which ITC and CARC had recommended is sometimes misunderstood in northern communities and is potentially divisive.[15] Other comprehensive environmental and land-use exercises, such as the Lancaster Sound Task Force, have also received a mixed response.[16]

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14. For the view of a senior Cominco official, see The Environmental Implications of Northern Development. Notes for a presentation by R.P. Douglas, Senior Vice-President, Operations, Cominco Ltd., at the Banff Centre School of Management, March 9, 1981.
15. See M.J. Wojciechowski and M.P.S. Brown, Eastern Arctic Study Case Study Series: Beaufort Sea Oil and Gas Development, Eastern Arctic Study, 1982 (pending).
16. For example, public responses at the Lancaster Sound Workshop, Ottawa, May 25-27, 1981.

A second point which emerged concerning the substance of the development consultation, monitoring and approval process relates to the regulatory and other 'hard levers' available to governments to control development. The Polaris development has been subject to the normal federal regulatory regime for mineral administration in the Northwest Territories. In addition, extensive negotiations occurred between Cominco and the federal government concerning the export licence for Cominco to ship concentrate from Polaris overseas and before joint signature of the Letter of Agreement on the terms and conditions of mine development in early 1980. These negotiations were followed by Cominco-GNWT negotiations concerning the socio-economic features of the development.

Despite the intensity and extent of company-government negotiations and agreements, the Polaris development contrasts with the Nanisivik case in the sense that government does not have infrastructure investment or equity participation in Polaris. Some officials in the federal and territorial governments hold the view that direct government participation gives some control over nonrenewable resource developments and their operation. This control is rather indirect in the case of a minority equity position, however. By contrast, the penalties for failure to comply with government regulations can be severe for a company which seeks to renew permits on licences or applies for new ones. Thus, the actual benefits and controls resulting from minority equity participation for governments remain a subject for further enquiry and debate.

A third question pertaining to the substance of interaction related to the Polaris development concerns who should be involved in discussion of 'private' as opposed to 'public' matters. A related problem is defining what is public and what is private in the north. These questions are particularly difficult answer when issues related to employment and the nature of the workplace emerge.

Cominco and government officials have approached community councils about mine employment, and used council and community meetings to discuss employment and training opportunities and conditions. In some northern communities, the council itself or a local GNWT official may act as the hiring agent to supply outside firms with local employees. But, in a very basic sense, the relationship between a prospective or current employee and an employing company is a private one. In a legal sense, although contracts are not always signed, there is a one-to-one relationship. Aside from legislated requirements such as workers' compensation and other occupational health and safety laws, the extent to which communities and other governments can or should become involved in dealing with employment-related matters for northern developments is presently an open question.

Consultations and efforts to accumulate goodwill may continue. They represent positive steps by companies, governments and communities. However, for Polaris as well as other northern developments, the question of who should decide about employment matters, particularly northern employment and training provisions, may be subject to testing by community, government and other interested parties who feel particularly affected.

Decisions affecting northern development are important to the north and to Canada as a whole. However, equally important as questions related to the substance of the decisions made are those related to the form of the decision-making process. The fact that the method of decision-making is often as important as the content of decisions and ideas when they are advanced in the north has been observed by others. For example, the Prime Minister's special advisor on constitutional development in the Northwest Territories (the Hon. C.M. Drury) noted the importance ascribed to the source of any proposals for the north when the content of such proposals was considered. He termed this the 'authorship issue'.17

A variety of interests have come forward in the process of approval of the Polaris mine. The most prominent were Cominco, as the proponent; the federal government and its various agencies; the GNWT; individual communities; ITC; the Inuit Development Corporation; and the environmental interest group, CARC. Each of these interests has taken a particular approach to the consultation and approval process and to the development itself. A summary of the approach and concerns of each is beneficial before raising more general issues about the form of the consultation and approval process.

Cominco, the proponent of the development, was required to satisfy the regulatory requirements of the federal and territorial governments. The company did so through completion of a variety of studies on various environmental subjects and broader inquiries into the impact of the porposed development. In addition, Cominco made presentations to government committees concerning the development and participated in joint government-company efforts to deal with employment and training. Finally, there were the negotiations with the federal government concerning the overall approval for the mine and the export license and with the GNWT concerning the socio-economic agreement.

In 1973, when development of the deposit was still uncertain, Cominco began a series of consultations to provide communities with information about mining in

17. Office of the Special Representative for Constitutional Development in the Northwest Territories. 'Local Government in the Northwest Territories', Yellowknife, 1978.

general and about the proposed Polaris development. As development of Polaris became more likely, company-community discussions continued, and focused more on employment-related matters.

Cominco, ITC, the regional Inuit associations, and CARC eventually became involved in an adversarial situation, as various public statements were made in the course of regulatory hearings and in press conferences, concerning the extent and nature of public information about the project and the timing and form of the approval process.

The federal government, both in Ottawa and Yellowknife, appears to have been concerned largely with regulation of the project and with its national industrial benefits. The chronology appended to this working paper gives some indication of the variety of government departments, agencies and ad hoc groups involved. The approach of the federal government to the approval of Polaris was complex in an organizational sense, even without a formal environmental assessment review.

The Government of the Northwest Territories was involved primarily in discussions about employment and training for northerners and in negotiation of the socio-economic agreement. The GNWT Department of Economic Development and Tourism began discussions with Cominco about employment and training requirements as early as 1975. The GNWT and Cominco have engaged in a cooperative effort to consult with communities about employment-related matters and to mount appropriate recruitment and training programs since that time. Ad hoc efforts have been supplemented by a Cominco/GNWT/federal government coordinating committee, established in 1980 to implement the recruitment and training programs.

Responsibility for negotiation of socio-economic agreements with resource companies was delegated to the GNWT during the Conservative government of Mr. Clark. Negotiations with Cominco did not begin until after signature of the more general Memorandum of Agreement between the federal government and Cominco in February 1980. The GNWT was represented in the socio-economic negotiations by the Department of Economic Development and Tourism in Yellowknife; regional offices of the GNWT were only peripherally involved. Aside from the concerns of the NWT Water Board, whose membership is partly appointed upon recommendation by the Territorial Assembly, available documentation indicates little involvement by the GNWT in environmental and renewable or nonrenewable resource management questions related to the Polaris development during the project approval process. With regard to renewable resources, this is surprising in view of the assignment of responsibility for wildlife management to the GNWT.

As indicated above, specific communities deemed by Cominco to be affected by the mine or to be potential sources of employees were consulted from 1973 onward. Initially all the communities contacted were in the central Arctic. However, after some criticism by north Baffin communities and discussions with the GNWT, some communities in the Baffin were also involved. A number of communities in both the central Arctic and Baffin are now designated hiring points for the Polaris mine.

The focal point for company-community discussions has consistently been the community council. Initial meetings dealt with the possibility of a mine development on Little Cornwallis Island, and with the nature of mining. Community interest and concern varied, with Resolute being most concerned about the immediate impact of the mine. (This will be discussed in more detail later in this paper.) Councils and residents of various communities also showed differences in attitude towards mine development before land claims were settled, and towards visits by Cominco representatives in their communities. In some communities, the public, the regional Inuit association, or ITC were consulted before council met with Cominco personnel.[18] In 1976, Cominco hosted a familiarization trip for two representatives from each of 7 central Arctic communities to Resolute Bay, the Polaris site and the Nanisivik mine. Every invited community participated, with the two representatives being chosen by the local council.[19]

As indicated earlier, interest in employment and other spinoff benefits from Polaris became more prominent as Cominco visits to communities continued. Company-community discussions seem to have become increasingly employment-oriented. However, communities have also been concerned about such matters as the timing of approval of the mine in relation to land claims discussions; effects on the environment; the need for on-going and more formal company-community consultation, perhaps using a company-community committee; and the question of how to involve other organizations, such as the regional Inuit associations and regional councils, in discussions about the mine.

Reports on Cominco-community consultations, reviews of council minutes, and interviews with community leaders indicate concerns about the consultation process. In general, Cominco is given good marks by communities for the approach it has taken in community consultation. Community concerns relate more to the

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18. See Employment of the Inuit at Polaris, Little Cornwallis Island; The Polaris Project and the Inuit; Pelly Bay Council Minutes, April 13, 1978; Spence Bay Council Minutes, January 24, 1980; February 7, 1980.
19. For a report of this program, see The Polaris Project and the Inuit.

general nature of community involvement and the involvement of other interest groups in the development approval process. Communities are questioning what levers they have, other than goodwill, to effect changes in company policy. In a broader context, local governments in some communities affected by Polaris are unsure of or positively dissatisfied with their role in the government approval and monitoring process. This point will be discussed further at the conclusion of this section.

The Inuit Tapirisat of Canada has publicly expressed concern about the environmental and planning implications of Polaris. ITC is also concerned about what it considers the prejudicial impact of Polaris on land claims negotiations and on any settlement provisions. These concerns and others have been expressed through ITC representatives at community meetings, briefs presented at public hearings, and through the media. These public announcements appear to have prompted some bilateral discussions between officials of ITC and the federal government and between ITC and Cominco.

The Canadian Arctic Resources Committee has indicated environmental concerns similar to those of ITC and has also made submissions at public hearings. CARC and ITC held a joint press conference about Polaris in November 1979.

Although associated with ITC, in the sense that it is the corporate entity to dispense compensation funds awarded to ITC in the post-claims settlement period, the Inuit Development Corporation has pursued somewhat different interests related to the Polaris development. It has engaged in discussions with Cominco, and federal and GNWT officials to determine the potential for economic spinoffs from the development and for opportunities for IDC participation. It became involved in recruitment of personnel for the construction phase, and continues to provide recruitment services under contract to Cominco now that the mine is in operation.

As indicated earlier, the major question which seems to emerge from a review of the substance of the Polaris development process is how to create a development approval process to enable appropriate consideration of socio-economic and environmental issues by all interested parties, while preserving incentive for industrial concerns to pursue development. The consultation and approval process for Polaris raises at least one additional question: What are the rules of the game concerning consultation with communities and other interested parties over major resource developments in the central and eastern Arctic?

There is every indication that Cominco engaged in community consultation in good faith, and the company is viewed in a positive light in most affected central

Arctic communities for that reason. However, company-community consultations were viewed by the company only as opportunities for mutual information exchange and recruitment. Some community officials are confused as to where community and other interests fit into the approval process. The sources of this confusion seem to be the federal and territorial governments.

Standard approval processes have been established for issuing land use permits and water licenses for mineral exploration and development activities. Although they must be consulted during these processes, communities in the central Arctic tend to feel ill-informed about applications or powerless to effect changes. Moreover, the federal presence does not appear to be strong in central Arctic communities which are asked to comment on applications. New government-community discussions about the nature of the current approval process and the prospects for change might be in order.

For its part, although active in community discussions concerning employment and training, the GNWT did not discuss the proposed socio-economic agreement with communities. The agreement was developed in Yellowknife with limited consultation between GNWT headquarters staff and staff in regional offices. In other areas, such as the GNWT devolution policy, the GNWT has taken positive moves to encourage community government initiative. Yet, in this instance, opportunities for local governments to participate with other governments in the development process were circumscribed by limited information, consultation, and involvement.

The federal and territorial governments have encouraged Cominco to deal directly with communities, and the company has done so, with some success. It would appear to be opportune for those same governments to review their own community dealings on development issues. At the very least, the rules of the game for community participation in development decisions should be clarified. Most pressing is the need to distinguish decision-making from advisory functions. 'Consultation' is an inexact and increasingly hollow word in the north; it has raised unfounded expectations that communities will have some voice in planning and development.

In the Polaris development, ITC and CARC acted as critics of the approval process. ITC can lay claim to being a special interest group because it represents the residents of the central and eastern Arctic in land claims and in other matters. The public sensitivity of northern development requires that affected communities, ITC, and other interest groups such as CARC are accorded timely opportunities to comment on proposed developments. One such opportunity was afforded by the NWT Water Board and government hearings in Resolute Bay in the

spring of 1980. Although this was a public forum, its timing as a device for receiving public comment on the mine development has been questioned by ITC and CARC. These hearings occurred after signature of the Memorandum of Agreement between the federal government and Cominco concerning the terms and conditions of the mine's development. Also, as a step in the regulatory process, Water Board hearings are intended to deal with only one subject, water. Accordingly, the public perception may have been that many other basic questions could not be officially considered.[20]

The consultation and approval process for the Polaris mine occurred over an extended period. During that period the regulatory system for northern resource development was significantly modified, and increased in complexity. The EARP process, for example, was initiated during the Polaris approval period. On a more general level, the federal development assessment process applied to the NWT seems to be in a constant state of flux. It is appropriate to ask whether or not some of the discussion about Polaris would have been more constructive if the rules of the game had been clearer and better conceived.

The Impact of the Polaris Mine on Northern Communities

The impact of Polaris on northern communities, particularly those in the central and eastern Arctic, is important to consider because it prompts local attempts to identify the positive and negative effects of the Polaris development and to deal with those effects through a formal governmental process.

The Polaris case involves at least two types of communities with different relationships to the development. The first is the 'staging or transit-point community', and is represented by the community of Resolute, located 60 miles southeast of the mine. Resolute will also experience the greatest environmental and socio-economic effects of the development, as well as serving as a major source for northern employees.

The second type of community, the 'feeder community', is remote from the mine and receives no direct environmental impact. The major impact results from

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20. This view that the agenda for northern development decisions is influenced by the staging of decision-making process itself is not unique to CARC and ITC. See for example: Gurston Dacks, A Choice of Futures, Methuen, Toronto, 1981, ch. 4; and Frances Abele and E.G. Dosman, 'Interdepartmental Co-ordination and Northern Development' Canadian Public Administration, vol. 24, no. 3, fall 1981, pp. 428-451.

employment of its residents at the mine, and the ancillary effects of that employment at home. The Polaris mine has a number of feeder communities in the central Arctic and Baffin regions. Initially, Cominco identified the communities of Holman, Coppermine, Cambridge Bay, Spence Bay, Pelly Bay, and Gjoa Haven as communities which, although remote from the mine site, could provide employees. Subsequently, communities in the Baffin were added. The list of designated hiring centres for Polaris now includes Resolute, Frobisher Bay, Cambridge Bay, Igloolik, Pond Inlet, Coppermine, Clyde River, Pangnirtung, Cape Dorset and Yellowknife. Accordingly, omitting Resolute, these thirteen centres comprise the feeder community list.[21]

Residents of Resolute have been active in voicing their comments about the development in meetings with Cominco and government officials and in the course of formal public meetings and hearings such as those mounted by the Department of Indian Affairs and Northern Development and the Northwest Territories Water Board. Local residents were also consulted by consultants hired by Cominco to prepare a report on the potential socio-economic impacts of the Polaris Mine.[22]

The most general observation concerning the reaction of Resolute to the Polaris mine is one of ambivalence. On one hand, local residents view the development as a positive source of employment for community members and as a potentially positive influence in the revitalization of the community and its business structure. On the other hand, Resolute residents appear concerned about certain of the environmental impacts of the mine, particularly on hunting and fishing. Of equal importance are questions concerning the impact of the development on the availability of housing in Resolute and on overcrowding of other community facilities. The community is particularly concerned that it will become subject to the 'camp follower' phenomenon, whereby relatives and friends of northern employees from other communities who take jobs at the mine move to Resolute in order to be close at hand. Although there was a surplus of housing in Resolute in 1980, the community is concerned that the inflow of people drawn by the mine will create housing shortages and overburden community services. In addition, the local impact of transients travelling to and from the mine is unknown.

Evidence of concerns of feeder communities about the possible impact of Polaris was gathered at meetings between Cominco, government representatives, and such communities, as well as in the course of research for the socio-economic impact study commissioned by Cominco. All communities regularly visited by Cominco

21. Memorandum of Understanding, schedule 1, p. 7-8.
22. Potential Socio-Economic Impacts of the Polaris Mine Project, June 1980.

representatives gave evidence of interest in employment at the mine and viewed the resulting economic spinoffs in a positive light. Nonetheless, such employment was seen to have two possible negative effects. The first relates to the possible 'skimming effect' that employment at Polaris would have on the existing community leadership. Most northern communities have a small population and an even smaller available pool of community leaders. There is concern that employment at Polaris will prove most attractive to the very individuals who also supply much of the leadership in communities and that the prolonged absence of these people from home will weaken the community government structure. An alternative viewpoint, advanced in the socio-economic impact study, is that many community leaders are already employed in their home communities and therefore would not be attracted by work at the mine.[23]

Another concern in feeder communities is that a prolonged absence from home by any members of the community will result in family difficulties, which may then turn into community disruptions related to alcohol abuse or other problems.

The issues raised by Resolute and other communities prompt the question of why a townsite has not been erected at Polaris, to accommodate the families of northern employees. Potential benefits of a townsite have been raised in studies commissioned by Cominco,[24] by CARC, and by communities themselves. However, it has been concluded by Cominco and by feeder communities that the negative impact of a townsite would outweigh any benefits. This view is shared by Resolute, which is concerned that construction of a townsite would accentuate environmental problems at the minesite, and that it would result in a greater weakening of the Resolute community structure than would the use of Resolute as a base community.[25]

Aside from the specific concerns identified by communities and others regarding the impact of Polaris on northern communities, some general observations emerge.

First, it would appear that local governments in a number of affected communities have a limited capacity to deal with the impacts of a development like Polaris. In most northern communities, over half of the population is under 18

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23. Potential Socio-Economic Impacts of the Polaris Mine Project, June 1980, p. viii.
24. Employment of the Inuit at Polaris, Little Cornwallis Island; The Polaris Project and the Inuit; Potential Socio-Economic Impacts of the Polaris Mine Project, June 1980.
25. Potential Socio-Economic Impacts of the Polaris Mine Project, June 1980, p. xi.

years of age. This leaves a limited number of people available to fill leadership positions in the community. Leaving aside the attraction of employment outside the community offered by Polaris, the impact of a major development on the community, when combined with other pressing issues, may serve to overburden the community leadership. In a number of communities, there are important issues of a very immediate nature, related to such matters as water supply and sewage disposal, housing, and dog control. It is understandably difficult for community leaders to juggle priorities in order to come up with the resources to consider remote developments like Polaris, given the necessity of dealing with other immediate issues related to the very survival of the community.

The second observation is that the potential effect of a development such as Polaris on the infrastructure of a staging community such as Resolute should not be minimized by other levels of government or by the development's proponent. Fortunately, considerable awareness of the potential impact of Polaris on Resolute seems to have been generated by the community itself and through research conducted on behalf of Cominco. A number of recommendations have been made to Cominco and to the territorial and federal governments concerning methods to monitor and alleviate potentially negative impacts of the development on Resolute. For example, Cominco's own research studies have recommended the hiring of a counsellor to deal on an on-going basis with Resolute.[26] On a more general level, company studies have recommended establishment of a formal company-community committee to deal with issues of concern to communities affected by Polaris.[27] Although company action on that proposal is uncertain, the Socio-economic Agreement between Cominco and the Government of the Northwest Territories provides for specific liaison between Cominco and Resolute and for an on-going program of community consultation with other affected communites.[28] The agreement also provides for the GNWT to undertake general monitoring of the impact of the development.[29] Although the agreement is silent on the specific involvement of affected communities in this monitoring process, it should be noted that the GNWT has undertaken community visits when monitoring the socio-economic impact of other resource developments such as those occurring in the Beaufort Sea. It is to be hoped that this precedent would be repeated and that some formal approach to involving communities in the government monitoring process would be adopted.

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26. Potential Socio-Economic Impacts of the Polaris Mine Project, June 1980.
27. The Polaris Project and the Inuit.
28. Memorandum of Understanding, schedules 5, 6 and 7, pp. 11-15.
29. Ibid., p. 15.

Economic Spinoffs from the Mine in Northern and Southern Canada

The development of a mine like Polaris has an economic impact in both northern and southern Canada. The purchase of goods and services for construction and operation of the mine creates secondary employment in different parts of the country as does the spending power of mine employees from the North and the South. Exports of concentrated ore from the mine have a positive impact on Canada's balance of payments.

Because of these and other economic spinoffs from the mine, the question of economic spinoffs has been of concern to a number of parties including: the federal government (Cominco made at least one presentation to the Advisory Committee on Industrial Benefits and National Resource Development, and engaged in further discussions with the Department of Industry, Trade and Commerce); the Government of the Northwest Territories (through its responsibilities for socio-economic matters pertaining to development); the Inuit Tapirisat of Canada (which made the question of northern benefits a public issue); the Inuit Development Corporation: and northern communities. Cominco, as the proponent of the mine, has also been interested in northern economic spinoffs and the question of how to balance northern preference with economic efficiency considerations.

This issue is important to the Eastern Arctic Study partly because of its relationship to the community benefits issue. There has been interest in the potential for increased spending power and secondary employment opportunities resulting from employment of northern residents at the mine. The potential role of the Inuit Development Corporation as a participant in spinoff endeavours from development has also been considered. This role is important when considering possible regimes for resource development in the ITC land claims area in the future.

The ITC in its various press conferences and public presentations about the mine made a public issue of the need to identify northern economic benefits accruing from the Polaris development. In contrast, IDC has undertaken direct negotiations with Cominco concerning participation in the development, and obtained a contract to recruit both northern and southern employees for the project.

For Cominco's part, the company commissioned the previously mentioned study of the socio-economic impacts of the Polaris mine. That study concluded:

> On the broad scale of the NWT economy, the Polaris mine will have a small but positive impact. This will be the case for most resource

development projects until the NWT develops a broader industrial base.[30]

The study further recommended that Cominco implement a northern purchase policy for the mine and that government's small business development programs take into account the requirements of proposed major resource development projects. In addition to Operation Katak, which relates to employment, Cominco is committed to a northern preference policy for purchasing through its socio-economic agreement with GNWT. There is no formal statement at the present time concerning how the territorial or federal governments intend to encourage small businesses to relate to major resource development, beyond continuing programs and practices already in place.

The major questions which remain concern how northerners will participate in future resource developments, and what will be the involvement of individual community entrepreneurs, community development corporations which might emerge, and organizations like IDC and co-ops.

Polaris as Part of a Cumulative Process of Northern Development

The final issue to emerge from the Polaris case which is of relevance to the Eastern Arctic Study is perhaps somewhat broader than those previously discussed. It concerns the relationship of the Polaris development to other resource development initiatives occurring in the north today or anticipated in the near future. Despite the nine-year period between the mine feasibility study and the commencement of operation at Polaris, the question which has been raised in northern communities and by ITC is whether or not the Polaris development was pushed too quickly. ITC maintains that approval of the Polaris mine should have been deferred until after land claims were settled, because it has prejudiced the terms of any settlement. ITC also thinks the development has undermined other broad planning exercises currently underway in the north, such as the Lancaster Sound Task Force. Interviews with community leaders revealed some concern that Polaris and other northern developments were being rushed, and that too many initiatives were being undertaken simultaneously for communities to cope with the changes at hand. Cominco's own socio-economic impact study pointed to the dangers of uncoordinated competition among major projects for northern employees. This study observes that a potential scramble for the

30. Potential Socio-Economic Impacts of the Polaris Mine Project, June 1980, p. x.

available northern labour force would be disruptive to community life and unprofitable for the various projects in the long run.[31]

It is evident that the challenge of coping with multiple resource developments of a major nature is one which must be faced by communities in the central and eastern Arctic, as well as by other levels of government. The specific challenge for community governments is to develop a useful approach to coordinating relationships with other levels of government and proponents of development, while at the same time dealing with the effects of development pressures on their own communities. The development of alternative approaches to dealing with these requirements will form part of the subsequent work of the Eastern Arctic Study.

31. Potential Socio-Economic Impacts of the Polaris Mine Project, June 1980, p. x.

4. RELEVANCE OF THE POLARIS CASE FOR THE FUTURE WORK OF THE EASTERN ARCTIC STUDY

An overview of the Polaris case provides a graphic indication of the complexities of mounting a resource development project such as the Polaris mine in the north. The case also illustrates an approach to company-community consultation which will be useful in later analysis. It should be noted that the approach used by Cominco in the Polaris case is contemporary and hence more sophisticated than that used by mining companies in the past. In proposing the development, the company was subjected to greater government and public scrutiny than was encountered by earlier projects. This is a reflection of a growing awareness of environmental issues and a changing political context. The approach to community consultation used by Cominco may also provide a useful comparison of the approaches used by a mining company and by oil and gas companies. (Such a comparison requires an understanding of the basic operating environment of each type of company.)

The Polaris case also raises some questions about government involvement in the project, such as: the nature of interaction between the federal and territorial governments and communities; the rules of the game which government has established to deal with companies, communities, and other interests on resource development matters; and the rules of the game government has established for companies to deal with communities. For example, is the federal government abrogating some of its responsibility for northern development by emphasizing company-community consultation rather than direct federal consultation with communities on specific aspects of proposed developments? Should community consultation involve more joint decision-making regarding certain aspects of resource developments? How can governments more accurately communicate their expectations of community involvement in the development process?

When contrasted with the Nanisivik case, this study should also point to some of the possible strengths and weaknesses of attempts by governments to control development through direct participation, compared to pursuing control through the regulatory process.

Finally, among the relevant issues emerging for future research from this case is that of determining the potential for participation of individual northern communities and organizations such as the Inuit Development Corporation in the economic spinoffs from resource development. Different approaches to equity participation and to local support or service activities for specific industry initiatives are of interest in this context.

These are some, but not necessarily all, of the relevant points which emerge from the Polaris case study as a result of the work conducted to date. The next task will be to elaborate more fully the points emerging from the Polaris case which will be useful to pursue in later analysis.

5. CONCLUDING REMARKS

There are a few points which may not have emerged from the specific review of issues associated with the Polaris case. Nevertheless, these are relevant to the Polaris case and to the general work of the Eastern Arctic Study.

The first general question which emerges concerns the extent to which individual communities are prepared to deal with resource development in the north. This question of preparedness seems to break down into three components:

i the extent of interest which individual communities show in resource development matters and in pursuing resource development;
ii the extent to which communities understand the development process, the wage economy, and southern business and public administration practices;
iii the extent to which individual communities have the capacity to deal with resource development issues.

Field work related to the Polaris case resulted in an observation that there is a spectrum of interest among central Arctic communities in resource development in general and the Polaris mine in particular. This variation was also observed by Cominco officials from the earliest days of the company's community consultation process. Moreover, in the intervening years, residents in some communities have shown little evidence of significantly increased interest in resource development matters, even though resource issues have become more generally prominent in the north. The central Arctic communities visited in connection with the Polaris case study seem to break into four categories:

i traditional communities such as Pelly Bay which appear interested in mine employment;
ii traditional communities such as Holman which do not appear to be particularly interested;
iii communities with significant reliance on the wage economy, such as Cambridge Bay, which do not appear to be particularly interested in employment at the mine;
iv communities with considerable familiarity with the wage economy, such as Coppermine, with significant interest.

It remains an open question as to how companies and governments should deal with each of these types of communities when pursuing resource development proposals. This will likely be a matter for further discussion.

Just as there are variations in the level of interest in resource development projects shown by individual communities, so there are variations in the level of understanding of the process of development, business, and public administration. As one industry representative interviewed by the Eastern Arctic Study observed: difficulties arise in part because southerners lack an understanding of the north; but equally important, northerners, including northern leaders, would benefit from a better understanding of southern approaches to development and business practices. In the realm of public administration, significant differences between communities were also observed in the extent of knowledge and understanding of the practices of the territorial and federal governments in dealing with resource development issues.

In reviewing the capacity of the local leadership in individual communities to deal with resource development issues, it is necessary to bear in mind the limited pool of personnel for leadership positions in northern communities. In addition, some communities have had very little experience with resource development issues. The development of leadership potential for local, regional, and national positions is an identified priority of ITC. Nonetheless, for the short term, ever-increasing exploration activity in the north makes the issue of the capacity of individual communities to deal with resource development projects an urgent one.

A parallel question to the preparedness of northern communities to deal with resource development concerns the extent to which individual resource companies are prepared to deal with northern development. As the Polaris example has indicated, although companies may have the capacity to undertake extensive consultation and negotiation with the federal and territorial governments, and with communities and other interested groups, the rules of the game are not always clear. Furthermore, the consequences of such activities are not always understood by any of the parties involved. The resulting uncertainty may be impossible to eliminate, but can perhaps be reduced. This would seem to be an appropriate goal for the federal and territorial governments. What changes in approach these two governments are willing or able to undertake to enhance the constructive nature of decision-making concerning northern development is an essential question for the future.

APPENDIX I

ACRONYMS USED IN THE POLARIS CHRONOLOGY (in order of appearance)

DOE	Department of the Environment
DIAND	Department of Indian Affairs and Northern Development
EARP	Environmental Assessment Review Process
NWT	Northwest Territories
RSCC	Regional Screening and Co-ordinating Committee
EPS	Environmental Protection Service
NIWA	Northern Inland Waters Act
GNWT	Government of the Northwest Territories
ITC	Inuit Tapirisat of Canada
IT&C	Industry, Trade and Commerce
MOT	Ministry of Transport
EMR	Energy, Mines and Resources
CARC	Canadian Arctic Resources Committee
FEARO	Federal Environmental Assessment Review Office
IDC	Inuit Development Corporation

POLARIS CHRONOLOGY

1960

- Lead/zinc discovered on Little Cornwallis Island by geologists working for J.C. Sproule and Associates Ltd. who were undertaking oil and gas exploration for Bankeno Mines Ltd.

1964

- Cominco Ltd. obtains 75 percent interest in all of Bankeno's Arctic mineral properties.

1964-1970

- On-going exploration of Little Cornwallis Island by Cominco.

1971

- Polaris orebody delineated through diamond drilling.
- Arvik Mines Ltd. formed by Cominco and Bankeno Mines.

1972-1973

- Surface and underground work for more detailed definition of ore body.

- Mine construction feasibility study undertaken by Bechtel for Cominco.

- NWT Water Board alerted to possible major and untraditional mine development by DOE representatives on Water Board.

January 1973

- Letter from chairman of Water Board to Cominco asking for a meeting on information plans for Polaris. Letter states importance of environmental baseline data to be collected 2-3 years before start of construction.

- J.E. Barrett, Personnel Services, Cominco, visits Yellowknife, Resolute, Cambridge Bay, Pelly Bay, Spence Bay to get preliminary reaction from Inuit and others to idea of working at Polaris. Discussions are hypothetical since decision to develop not yet made.

- T.G. Forth, Employment Chief, Dept. of Local Government, Yellowknife, visits community leaders introducing plan to develop mine at Little Cornwallis - takes along information on Cominco mining and smelting in general and Polaris Project. Receives community suggestions on familiarization visits.

November-December 1973

- Letters between DOE members on the NWT Water Board and Chairman of Water Board discussing the development of Polaris Mine, the need for development of baseline studies, and request for a meeting with Cominco to review existing information.

1974

- Cominco begins discussions with DIAND, DOE, NWT Water Board on environmental impact of Polaris.

- Cominco informed of variety of legislative and regulatory requirements it must meet.

- DOE indicates it is going to do Environmental Impact Assessment.

- Cominco undertakes a variety of environmental and technical studies.

- Site visits by DOE and NWT Water Board staff.

22 February 1974 - Cominco meets with DIAND and DOE in Yellowknife to discuss environmental work done to date. Action from this meeting:
  i suggested that Strathcona Sound Working Group of DOE review Polaris Proposal;
  ii further technical meetings planned between industry and government;
  iii Cominco advised of importance of doing environmental studies commencing soon.

5 March 1974 - Letter from Chief, Environmental Control Branch, DOE to Cominco strongly advising Cominco to contact the Assistant Deputy Minister of DOE in view of DOE's legislative responsibilities for Ocean Air Act and Fisheries Act.

7 March 1974 - Letter from Chairman of Water Board to Cominco as a result of February 22 meeting outlining areas that need investigation prior to applications for Water Licence or Surface Lease. These are: water supply, tailings disposal, municipal wastes, fuel supply and storage, roads and airstrips, air pollution and impact on wildlife. Regulatory requirements are also given. Confirmation of next meeting between industry and government March 24, 1974.

- DOE requests information from Cominco on its Greenex Mine in Greenland in order to assess projects in the north similar to Polaris.

27 March 1974 - Meeting between Cominco and government. Agenda includes:
  i role of DOE;
  ii discussions of the review procedure identifying areas of improvement/changes from the Strathcona Sound Task Force;
  iii establishment of review procedures for the Arvik mines Task Force;
  iv outline of concerns to be discussed with Cominco.

v review of DOE information available on the Little Cornwallis Island Area.

24 April 1974 - Letter from DOE to Cominco with attached document outlining the information required by DOE for environmental impact assessment of Polaris mine. The document stresses environmental protection, baseline studies of environment sources of contamination and preventative measures necessary to minimize environmental effects.

- The following is a list of reports on Polaris project up to May 1974.

i *Cornwallis Island and Adjacent Smaller Islands, Canadian Arctic Archipelago.* Paper 67-64 prepared by Geological Survey of Canada, 1968.

ii *Report on the Feasibility of Using Frustration Lake as a Water Supply for Arvik Mine.* F.H. Rigler, May 1974.

iii *Preliminary Site Evaluation - Polaris Mine.* Strong, Moorehead, Sigsby Ltd., June 1973.

iv *Preliminary Geo-Technical Investigation. Arvik Mines Ltd.* Canadian Bechtel Ltd., May 1974.

v *Water Sampling - Garrow, Frustration and Lois Lake.* Cominco Ltd., September 1973.

vi *Feasibility Study for Marine Disposal of Tailings at the Polaris Mine Site.* Ellis and Littlepage, April 1974.

15 July 1974 - B.C. Research submits its proposal for the Polaris environmental studies to Cominco. They were requested to document and investigate baseline environmental conditions prior to mining. The work is proposed for August 1, 1974 to August 23, 1974.

27 July 1974 - DOE project engineer from Yellowknife makes a short tour of Polaris Mine. DOE requests a meeting with Cominco in September 1974 for an information exchange and progress report on environmental studies.

July 1974 - Water Survey of Canada, Inland Waters Directorate does a study of Frustration Lake runoff and makes suggestions to Cominco regarding the feasibility report done by Rigler on Frustration Lake.

17 August 1974 - NWT Water Board technical committee meets with Mr. Merrifield of Cominco in Resolute Bay, NWT and discusses alternatives for tailings disposal & construction problems in Arctic. It was stated at this time that the proposed start up date for mine would be November 1976. A site visit to the mine is also made.

9 October 1974 - Cominco submits water application and mining industry questionnaire to the NWT Water Board. A covering letter states tailings disposal concept of separating coarse and fine particles and disposal of fine and contaminated water in Garrow Lake and coarse material in Cominco Bay. As a result of this application Cominco is invited to meet with technical committee 9 January 1975 to give details of studies planned.

November 1974 - The Polaris proposal is referred to the Regional Screening and Co-ordinating Committee (RSCC) under the EARP process of review for a DOE technical review and for a DOE position for presentation at the January 1975 Water Board technical committee meeting. EPS is assigned the lead to review the project and the Strathcona Sound Task Force is to conduct the review.

- DOE formalizes an Arvik (i.e. Polaris) Task Force to review Cominco submission. Task force recommends rejection of Cominco application until appropriate environmental assessment made.

18 December 1974 - The DOE Task Force is renamed the Arvik Mines Task force. It prepares an initial DOE position which was submitted to the RSCC December 18, 1974.

- The RSCC accepts the recommendations that:

1. the NWT Water Board should refuse to grant licence to Cominco until a satisfactory environmental assessment is conducted;
2. the Water Board should convene a meeting with Cominco so that the DOE task force can review the deficiencies and give requirements for acceptable environmental evaluation;
3. the meeting with Cominco should also be structured to discuss other environmental considerations outside terms of reference of the Northern Inland Waters Act, e.g. air pollution, wildlife;
4. the terms of reference for proper environmental assessment should be agreed on by Cominco, the Water Board, DOE and DIAND.

1975

January 1975 - Arvik Mines Task Force draws up a list of deficiencies from reports and studies done to date on Polaris mine. The DOE position paper and list of deficiencies are tabled at the Water Board technical committee meeting with Cominco January 27, 1975. The application for water licence is reviewed at this meeting as well as the other interests of DIAND and DOE (land, sea, and air).

February 1975 - DOE reaches conclusion that a formal environmental assessment should be conducted by proponent before water licence issued. Guidelines for this would be issued by Dr. Logie, Chairman of EARP. This conclusion changed at a later date.

April 1975 - DOE tries to get DIAND to withold water licence on basis of non-water related concerns.

- Cominco submits further reports in support of water licence application.

  i *Environmental Study of Polaris Mine, Little Cornwallis Island.* B.C. Research.
  ii *Appendices to Accompany Re-assessment of Tailings Disposal to the Sea at the Polaris Mine.* University of Victoria.
  iii *A Feasibility Study of a 2,800 TPCD Underground Mining Operation.* Cominco Ltd.
  iv *Preliminary Engineering Report and Appropriation Cost Estimate for 2,800 STPC Lead and Zinc Facilities at Polaris Mine.* Canadian Bechtel Ltd.
  v *Polaris Mines Project - Summary of Feasibility Work.* Cominco Ltd.

16 April 1975 - Cominco letter to DIAND announcing a changed approach to tailings disposal; disposition of tailings now to be entirely into Garrow Lake.

28 April 1975 - DOE prepares an updated deficiency statement based on review of information made available since last statement. As a result of Cominco's decision to place tailings in Garrow Lake the DOE task force changes its position on what further studies needed to be done. This is submitted to technical committee May 1975.

29 April 1975 - Technical committee meeting - discussions on water supply, pumphouse and intake structure design, use of water in mill, tailings disposal.

11 September 1975 - Letter of H.M. Giegerich, Project Manager, ARVIK, to Jack Witty: 'Employment of native people at the Arvik opera-

tion will be one of our prime objectives - we will be prepared to cooperate with your group in any reasonable way to achieve this.'

September 1975 - COMINCO closes down site pending negotiation of export licences with federal government. No further studies of environment, but Cominco submits revised Water License Application.

7 October 1975 - Meeting with community of Resolute regarding Polaris. In attendance: officials of Cominco, DIAND, GNWT, ITC.

20 October 1975 - Cominco submits a revised application and mining questionnaire for water use due to change in tailings disposal plans, fresh water usage and reduction in daily mill tonnage.

1976

January 1976 - DIAND officials request that the Polaris proposal go to an EARP panel. FEARO does not act on this request. RSCC of DOE thinks that DOE's Arvik Mines Task Force, NWT Water Board and Technical Committee are adequate mechanisms to deal with proposal.

20 January 1976 - Technical Committee meeting to discuss revised water application and make recommendations. B.C. Research environmental studies project proposal is also reviewed. Recommendations from this meeting are as follows.

i Request that the Water Board require applicant to reply in detail to technical committee's recommendations from May 6, 1975. Until this information is received no further recommendations can be made on application. The B.C. Research project proposal does not contain sufficient detail for the Water Board to fully assess.

ii Cominco be required to undertake environmental studies on Garrow Lake and Garrow Creek during 1976 and that they be carried out in accordance with May 1975 recommendations.

iii Cominco to submit to the Water Board a detailed study proposal prior to on site work.

iv Marine studies need to be carried out because of possible toxic outflow into arctic waters. Recommend these be jointly funded by industry and government.

- Cominco responds to NWT Water Board requests for more studies.

March 1976 - Cominco responds to the Water Board Technical Committee recommendations of May 6, 1975.

10 March 1976 - Chairman of EARP requested to determine how strongly DIAND feels about Polaris going to an EARP panel. Regional DOE staff did not agree that EARP panel should deal with Polaris. Chairman of EARP writes to Assistant Deputy Minister of DIAND asking for strong reasons why Polaris should go to EARP. May 4, 1976 - Based on letter from ADM of DIAND to EARP chairman, the project is withdrawn from EARP.

26 March 1976 - Letter from the Minister of DIAND, Judd Buchanan to F. E. Burnett, Chairman and Chief Executive Officer, Cominco Ltd., Vancouver. The letter proposes to state the government's position on a number of issues which, subject to the concurrence in principle of Cominco, would form the basis of an agreement to be negotiated between the federal government and Cominco, assuming that Cominco

decided to bring the mine into production. The issues outlined in this letter include:

- Canadian processing of concentrates,
- ocean transportation of Polaris concentrates,
- financial considerations,
- social considerations,
- environmental considerations, and
- Canadian content.

- The section entitled, "Social Considerations" emphasizes the federal interest in northern employment and economic opportunities for northerners. It also states:

> I would expect your Company to continue the consultation you commenced with Inuit Tapirisat and the Resolute Bay council last October on all matters relating to the project; to extend these consultations to include those other communities in the Eastern and Central Arctic and the Keewatin whose residents might be expected to be interested in working on the project; to develop work schedules and transportation arrangements for workers from these communities appropriate to their needs to offer a working environment and training opportunities suited to the Inuit; and to provide other economic opportunities where possible.
>
> Assistance from both the federal and territorial governments would, of course, be available to help you in these matters ...

The section on Environmental Considerations refers to the fact that the project has been referred to the government's Environmental Assessment and Review Process as well as to the regulatory review of the NWT Water Board.

1 June 1976

- DOE submits a position paper on the proposed development of Polaris mine prepared by Arvik Mines Task Force. Paper was done to provide a DOE position on the environmental studies and commitments made by Cominco March 6,1976. The Water Board technical committee accepts the recommendations and requirements set by the Task Force as they pertain to the water use and waste disposal but does not support the non-water related aspects as these are beyond its terms of reference. Recommends that DOE contact Assistant Director Renewable Resources, DIAND, to determine what the approach to non-water aspects will be. DOE position paper is presented to Cominco for future studies.

- Ed Barrett retained to explore more fully Inuit labour and living preferences and to update communities on status of project.

1 July 1976 - Cominco announcement that plans to proceed with Polaris mine will be deferred for time being, due to non-issuance of an export permit and restriction of use of foreign vessels to ship ore concentrate.

16 August 1976 - NWT Water Board responds to Cominco's letter of March 2, 1976 responding to Water Board requirements from May 6, 1975. Pursuant to section II (2) of NIWA, Arvik Mines must complete requirements to satisfaction of the Water Board and submit necessary reports and data to allow the Water Board to proceed with a calling of a public hearing. Letter asks for final studies to be completed summer of 1977.

17 August 1976 - A meeting is held between territorial officials and Cominco representatives. These included, from the territorial government: Jack Witty, Chief, Employment Division; Terry Daniels, Chief, Special Projects Division; Russell Look, Employment Councillor; Bob Rankin, Coordinator of Community Employment Strategy; Fred James, Apprentice Programs; Dan Hunter, Special Employment Programs; and Ed Oberst, Supervisor of Resource Centre. From Cominco: Hank Giegerich, Project Manager; Ed Barrett, Consultant; and C.F. Lambert, General Supervisor, Personnel Administration.

The discussion relates to proposed community visits and to the kind of material that should be shown in the communities.

- trip 1, meeting with chairman or mayor of local councils;
- trip 2, the presentation on mining and Polaris;
- trip 3, picking up representatives for a visit to Polaris and and Nanisivik:
- trip 4, community meetings to gather local views.

August-September 1976 - A series of meetings occurs between officials of Cominco, the federal government, and the GNWT. R.P. Sterling represents the federal government while Jack Witty, Terry Daniels and Russell Look represent the territorial government. Cominco participants are usually Hank Giegerich and Ed Barrett.

The purpose of the meetings is to review plans for the community consultation visits, to what kind of material should be presented, and what kind of questions should be raised and discussed. It is decided that Cominco would view housing alternatives without making a firm commitment to bunkhouse or townsite accommodation. As much detailed information relating to the mine as is possible will be given, including rates of pay and training programs.

August 1976	- DOE-Arvik Mines Task Force suspends activities in view of Cominco's decision not to proceed further with development of Polaris mine.
August 1976	- Ed Barrett, Cy Lambert and Russell Look undertake trip #1 to seven communities in connection with Barrett's work on community consultation.
October 1976	- Barrett, Lambert, Look, Glenn Warner (representing T. Daniels) undertake community trip #2.
October 1976	- trip #3 by community representatives from seven central Arctic communities to Resolute, Little Cornwallis, and Nanisivik.
October-November 1976	- trip #4 to seven central arctic communities to review results of site visit. Previous participants joined by R.P. Sterling, Chief, Training and Employment Liaison Division, Territorial and Special Development Branch, DIAND.

1977

- Meetings between Cominco and Arvik Task Force.
- More studies.

7 June 1977

- Cominco meets with technical committee to discuss study requirements and project update was given.

1978

17 January 1978 - Meeting of Interdepartmental Arvik Working Group (IT&C, MOT, EMR, DIAND, DOE) to review plans for Polaris and discuss letter of agreement between Government of Canada and Cominco Ltd. Also negotiations between Cominco, IT&C, MOT, EMR, and DIAND regarding opening of Polaris property.

March 1978 - Cominco submits report to the Water Board - *Polaris Mine Aquatic Environmental Studies*, 1977.

2 April 1978 - Cominco resubmits mining industry questionnaire with revisions and more information. No formal application for water licence is submitted at this time.

Spring 1978 - Internal federal discussions on terms of proposed letter of agreement.

30 May 1978 - A meeting of the Advisory Committee on Industrial Benefits and Natural Resource Development takes place in Ottawa. At this meeting a presentation is made by Cominco with respect to the Polaris project. Cominco is represented by Hank Giegerich. Federal representation is from a variety of departments including Industry, Trade and Commerce, Indian Affairs and Northern Development, Finance, Ministry of State for Science and Technology, Canadian Transport Commission, E.M.R., Canada Employment and Immigration, Fisheries and Environment, as well as the Advisory Committee on Northern Development. There is also representation from the GNWT.

Summer 1978 - Letter from Minister of Indian Affairs and Northern Development to Chairman of Cominco reiterating importance of socio-economic objectives of Polaris and making reference to earlier meetings of Cominco with Interdepartmental Arvik Working Group.

1979

January 1979	- FEARO decides Polaris Project will not require an EARP review.
	- federal government outlines conditions under which it would be prepared to grant an export licence. Cominco announces decision to proceed although no water licence yet.
	- Cominco buys remaining 25 percent interest from Bankeno Mines. Arvik becomes Polaris.
27 September 1979	- Letter from Michael Amarook, President of ITC, to Jake Epp, Minister of Indian Affairs & Northern Development, raising ITC concerns re Polaris.
2 October 1979	- Senior officials of Cominco make presentation on Polaris to meeting of Advisory Committee on Industrial Benefits in Ottawa. Committee has representation from various federal government departments.
5 November 1979	- Cominco makes public announcement that Polaris will proceed.
6 November 1979	- Jake Epp makes public statement in response to Cominco announcement.
13 November 1979	- Joint ITC/CARC press conference re Polaris.
15 November 1979	- Letter from John Fraser (Minister of the Environment) to Jake Epp (DIAND) indicating concern over criticism of Polaris environmental scrutiny by CARC and ITC.
22 November 1979	- Polaris mine briefing in Yellowknife. Attendance by officials of Cominco, GNWT and federal government.
30 November 1979	- Thomas Suluk and John Merritt from ITC meet with senior DIAND officials to be briefed on Polaris.

1980

3 January 1980 - Letter from Michael Amarook to Jake Epp raising questions about Polaris project, land claims, environmental impact re socio-economic action plan.

11 January 1980 - Meeting of officials from Cominco, GNWT, and Outcrop Ltd. re implications of Polaris project for GNWT. Reference to discussion of two types of committees:
- community consultation committee,
- a training/recruitment committee.

15 January 1980 - To avoid co-ordination problems, Cominco suggests to GNWT that a steering committee of GNWT, federal (Canada Employment), and Cominco officials be established to deal with training matters re Polaris. Suggested that committee co-ordinate training and advise Cominco re progress of training efforts.

- Cominco contracts with IDC to provide all recruiting and payroll services for Bechtel during construction.

January 1980 - Construction start.

Winter 1980 - Letter of Agreement signed by Jake Epp, (Minister of Indian Affairs and Northern Development) and Cominco Ltd. re Polaris project and conditions. Among other terms, major responsibility for socio-economic matters is assigned to GNWT with provision for Minister of DIAND to be kept informed.

13 February 1980 - Contract for socio-economic study in connection with Polaris Mine awarded to Outcrop Ltd. of Yellowknife.

15 February 1980 - Letter from Dan MacKinnon of DIAND to Rod Douglas of Cominco referring to:
i DIAND discussions with IDC on business opportunities for Inuit with Polaris,
ii desire of Kitikmeot Inuit Association to be focal point for consultation rather than communities.

21 February 1980 - Letter from P. Tellier, Deputy Minister, DIAND, to deputies of Transport, IT&C, and EMR informing them of letter of agreement with Cominco and suggesting that DIAND be main point of contact and co-ordination.

27 February 1980 - Cominco makes statement to NWT Assembly caucus on Polaris project.

28 Feburary 1980 - Telex from Jim Britton, GNWT Regional Director, Baffin Region, to J. Witty, Chief, Employment Division, Dept. of Economic Development & Tourism, Yellowknife, suggesting

Cominco turn its attention to other Baffin communities.

4 March 1980 - Telex from Witty to Britton responding.

4 March 1980 - Meeting of Cominco/Government Coordinating Committee (representatives from federal government and GNWT) to set up steering committee on Polaris employment, community consultation, etc.

10 March 1980 - Letter from Michael Amarook, ITC, to G. Braden, Minister of Economic Development and Tourism, GNWT, commenting on role of GNWT in socio-economic area for Polaris, and on the absence of EARP.

10 March 1980 - Letter from Michael Amarook to Paul Tellier raising ITC's concerns on land claims, lack of EARP, and socio-economic concerns.

10 April 1980 - Public meeting in Resolute to prepare residents for Water Board meeting. Arthur Redshaw, Assistant Regional Director, Renewable Resources, DIAND, promises that all water inspections for Polaris will be reported back to communities. Present are officials of GNWT, DIAND, Coast Guard and Cominco. Questions from audience deal with fishing in Garrow and Frustration Lakes.

21 May 1980 - Press release by ITC critical of Cominco's project (lack of EARP etc.).

22 May 1980 - Water Board hearing in Resolute re Polaris.

23 May 1980 - General public meeting in Resolute to discuss those areas related to development of Polaris not covered by Water Board hearings.

June 1980 - Tellier's response to Amarook's March 10, 1980 letter.

June 1980 - Release of report Potential Socio-economic Impacts of the Polaris Mine Project by Outcrop Ltd., Yellowknife, in association with DPA Consulting Ltd., Vancouver.

25 August 1980 - George Braden's response to Amarook's March 10 letter, agreeing that Polaris should be subject to EARP.

November 1980 - 'Deficiency Statement' prepared as GNWT response to Outcrop Report.

10 December 1980 - GNWT 'Deficiency Statement' sent to Cominco as basis for discussion of socio-economic agreement.

1981

Winter 1980-81	- An official of the Inuit Development Corporation (IDC), Earl Laliberté, joins Cominco officials on tour of Spence Bay and Cambridge Bay.
April 1981	- Jacobie Ikeperiar of Igloolik is hired as Cominco's northern employment co-ordinator for Polaris.
15 May 1981	- Letter from Lambert to D. Wisebeck, Chief, Planning and Resource Development, Department of Economic Development and Tourism, responding to 'Deficiency Statement'.
12 August 1981	- Memorandum of understanding signed between Cominco and the Government of the Northwest Territories, respecting the socio-economic action plan for the Polaris Mine.
13 August 1981	- Barge-mounted plant and associated facilities arrived at the Polaris mine site, nine days ahead of schedule.
9 October 1981	- Chairman of NWT Water Board signs Polaris water license and forwards it to Minister of Indian Affairs and Northern Development for final approval.
Late 1981	- Production starts.

1982

August 1982	- First concentrate shipment scheduled.

MISCELLANEOUS SOURCES:

Profile Sheet on Polaris Project, EAS, 1981.

Employment of Inuit at Little Cornwallis Island, J.E. Barrett, Cominco, 1973.

The Polaris Project and the Inuit, J.E. Barrett & Associates, 1976.

Potential Socio-economic Impacts of the Polaris Mine Project by Outcrop Ltd., Yellowknife, in association with DPA Consulting Ltd., Vancouver, 1980.

Northwest Territories Water Board, Northwest Territories Water Board Public Hearing: Application for a Water Use Licence by Cominco Ltd., Polaris Mine Project, May 22, 1980.

APPENDIX II

POLARIS INTERVIEW RESPONDENTS

ADAMACHE, Helen, Secretary Manager, Hamlet of Coppermine

AWA, Simon, President, Baffin Regional Inuit Association

BARRETT, Ed, Barrett Enterprises, North Vancouver

BLACK, Gary, Regional Director, Central Arctic, Cambridge Bay

BRITTON, Jim, Regional Director, Baffin Region, GNWT

BROWN, Bill, Employment Supervisor, Polaris Mine, Cominco, NWT

BUSSEY, Eric, Department of Local Government, Central Arctic Region, GNWT, Cambridge Bay

CONNELY, Roger, Assistant Regional Director & Acting Superintendent, Economic Development, Central Arctic Region, GNWT, Cambridge Bay

CULLEN, Andrew, Water Administrator, Department of Indian and Northern Affairs, Yellowknife

CURLEY, Tagak, President, IDC

DEMCHESON, Tom, Employment Division, Departmentof Economic Development & Tourism, GNWT

DICKIE, Colin, GNWT Field Services Worker, Holman Island

EETOOLOOK, James, Secretary Manager, Hamlet of Spence Bay

FARGEY, Harold, Executive Vice President, Cominco Ltd.

FOSTER, Terry, Department of Economic Development & Tourism, GNWT

GOSHALUK, Howard, Department of Economic Development & Tourism, GNWT

FROOD, Peter, Co-op Manager, Holman

GANSKE, Joe, Territorial Lands Administrator, Department of Indian & Northern Affairs, Yellowknife

GIEGERICH, Hank, V-P, Northern Group, Cominco Ltd.

HITCHCOCK, Jack, Land Claims Negotiator, Department of Fisheries & Oceans, Ottawa

HORNAL, Bob, former Regional Director, NWT, Department of Indian & Northern Affairs, Yellowknife

HORSEMAN, Grant, Personnel Officer, Cominco Ltd.

KAKANIUM, Guy, Mayor, Pelly Bay, NWT

LAMBERT, Cy, Manager of Administration, Northern Group, Cominco Ltd.

MACKINNON, Dan, Director General, Non-renewable Resources, Northern Affairs Program, DIAND, (7 April 1981)

McDOUGALL, Dave, Holman Island Council Member

McQUARRIE, Jo, Executive Secretary, NWT Water Board

NOKADLAK, Terrie, Settlement Manager, Holman

OVIATT, Barrie, Chief of Training and Development, Department of Local Government, GNWT, Yellowknife

PATERSON, R.J., Chief, Marine Habitat Division, Department of Fisheries & Oceans, Ottawa

PATTERSON, J.M., B.C. and Yukon Chamber of Mines

PEDERSON, Red, Deputy Mayor, Hamlet of Coppermine and President, Coppermine Development Corporation

REDSHAW, Arther, Assistant Regional Director, Renewable Resources, Department of Indian & Northern Affairs, Yellowknife

SIMARD, Roger, Special Projects, Northern Economic Planning, DIAND

STERLING, Robert, Chief, Employment & Socio-Economic Planning Division, DIAND, Ottawa

TAPTUNA, Fred, Mayor, Hamlet of Coppermine

WITTY, Jack, Chief, Manpower Development, Department of Economic Development & Tourism, GNWT

COMMUNITY VISITS

Holman Island	July 31 - August 4, 1981
Coppermine	August 5 - August 6, 1981 September 30 - October 2, 1981
Cambridge Bay	August 6 - August 10, 1981
Spence Bay	August 10 - August 12, 1981
Pelly Bay	August 12 - August 15, 1981
Gjoa Haven	August 15 - August 17, 1981

APPENDIX III

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Katherine A. Graham is Director of the Institute of Local Government, Queen's University. She holds degrees in Politics from Glendon College of York University and Queen's University and has taught at both universities. A significant part of her research and consulting experience relates to the North. This includes work on the impact of small craft harbour facilities in the Northwest Territories, a review of the administration of mineral exploration in the Yukon and Northwest Territories, preparation of background studies on local and regional government in the Northwest Territories for C.M. Drury and evaluation of the funding of public participation in the Beaufort Sea Environmental Assessment Review. Katherine Graham is Principal Investigator for the Eastern Arctic Study.

THE INSTITUTE OF LOCAL GOVERNMENT

The Institute of Local Government, Queen's University, was founded in 1944 to provide a focus for educational and research activities related to municipal government in Canada. It is part of the School of Graduate Studies and Research at Queen's University. Katherine A. Graham is Director of the Institute.

Within this broad mandate, the Institute has devoted itself to the continuing education of municipal officials, to the provision of advice to municipal officials and others dealing with various problems related to urbanization, local government politics, organization and management. Its research program has spanned eight broad areas of interest:

- studies of municipal institutions;
- the municipal political process;
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The Centre was established in 1973, under the sponsorship of Queen's University, the federal Department of Energy, Mines and Resources, and The Mining Association of Canada, to carry out a program of research and publication on mineral policy issues. Mineral resources considered by the Centre include metallic, industrial and non-metallic, and structural minerals, but exclude petroleum and natural gas.

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EASTERN ARCTIC STUDY

The Centre for Resource Studies and the Institute of Local Government, both of Queen's University in Kingston, Ontario, are undertaking a study of the ways in which the land claim of the Inuit Tapirisat of Canada (ITC) may affect local government and mineral development in the Northwest Territories (NWT). Financial support for the study is being provided by an independent agency, the Donner Canadian Foundation. Advisory support is being provided by the ITC, the the federal government, the Government of the Northwest Territories, and many other agencies, companies and interested groups.

The objectives of the Eastern Arctic Study include the following:

1. to study the potential impact of the settlement of ITC land claims, and of constitutional development in the NWT, on local government in the ITC area;

2. to study the potential impact of these changes on mineral development (including both petroleum and mining) in the ITC claim area.

3. to present the results of this research in a manner which will permit its use by northerners and other interested parties to anticipate possible difficulties and mitigate their effects.

Local government is extremely important to the residents of the Northwest Territories, because local councils and committees provide services that are basic to everyday needs. In addition, a community's local government can often act as the interpreter and advocate of peoples' interests and needs.

We expect the land claim negotiations to result in two related outcomes.

i Local governments will be given increased responsibilities in the land claim area. Some changes are already in progress, chiefly through the initiative of the communities themselves and of the Government of the Northwest Territories. ITC also supports stong local government. The phrase 'local government' refers to any governing authority established below the territorial level. It could include, for example, regional governments as well as hamlet or settlement councils and their committees.

ii There will be a significant increase in the degree of influence exerted by local governments, and by native institutions such as development corporations and cooperatives, on resource planning and the mineral development process.

Thus we expect the settlement of claims to affect significantly the climate for mineral development in the NWT. Native people will have strengthened local governments and an expanded role in planning the nature and direction of resource development.

The possibilities for mineral development in the ITC claim area are substantial, and the future of resource development in this region has implications for the welfare of all northerners, and for all Canada. It is therefore important that all parties to the negotiating process understand the possible consequences of their decisions and actions. The purpose of this study is to contribute to that understanding.

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EASTERN ARCTIC STUDY PUBLICATIONS

The following publications are currently available from the Eastern Arctic Study:

The Inuit Land Claim, Constitutional Development, and Local Government Reform in the Northwest Territories: An Overview, by Katherine A. Graham and Anne B. McAllister, 50 pages, published 1981.

Industrial Development in the Eastern Arctic Study Area: A Preliminary Overview, by C. George Miller, 31 pages, published 1981.

Eastern Arctic Study Bibliography Listings, as of June 1, 1981, by M.P. Sharon Brown, 70 pages, published 1981.

Eastern Arctic Study Case Study Series: The Alaska Native Claims Settlement, by David Baker, 100 pages, published 1982.

Eastern Arctic Study Case Study Series: Mineral Exploration in the Baker Lake Area, by Anne B. McAllister, 58 pages, published 1982.

Eastern Arctic Study Case Study Series: The Development of the Polaris Mine, by Katherine A. Graham, 61 pages, published 1982.

Eastern Arctic Study Case Study Series: The Nanisivik Mine, by Margot J. Wojciechowski, published 1982.

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